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ABSTRACT

A survey was conducted to determine the status of computer inservice training and computer usage among northern New Jersey educators. Approximately 500 questionnaires were distributed to teachers enrolled in a graduate educational leadership program to assess their previous computer usage, computer usage in schools, and perceived computer educational needs. Twenty-six percent of the surveys were returned, representing educators from 26 school districts in four counties; the sample included elementary teachers (35%), middle/junior high teachers (13%), and content or special area teachers (45%). Results indicate that: (1) more than half of the respondents still had not had any course work with computers; (2) among those who had taken courses, the most cited were overview of computers, Logo, BASIC, and word processing; (3) only 23% stated that they had one computer in their classrooms and only another 11% have more than one; (4) when computers were available, the Apple was the one most frequently mentioned; (5) 81% indicated they were definitely (45%) or possibly (36%) interested in taking courses in computer education; and (6) 44% said they would definitely (28%) or possibly (21%) be interested in pursuing masters level work in computers, especially if it would prepare them to become supervisors/coordinators of computer programs in schools. Respondents' interests in future computer usage in schools included computer software, curriculum integration and instructional design, word processing, computer programming, telecommunications, computer graphics, computer networks, and administration and supervision of computer programs. (JB)

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Educational Computing in New Jersey: A Status Report

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EDUCATIONAL COMPUTING IN NEW JERSEY: A STATUS REPORT

Nothing exemplifies the educational renaissance of the eighties more than the advent of computers in schools. In one short decade, the number of computers in our nation's classrooms will have risen from 31,000 in 1981 to 750,000 by the end of the decade (Bonner, 1984).

While educators race to revive and redesign meritorious teaching practices in a valiant attempt to disprove the ill-fated projections for our students, computers continue to move rapidly into every facet of curriculum development. Still unresolved, though, are two questions: first, are teachers skilled enough to embrace these machines with the fortitude and enthusiasm needed to effect change during this transitional period? Second, even if teachers have such skills, do they really have the kind of computer access that is typically portrayed by national statistics?

In an attempt to better understand how New Jersey stacks up in terms of computer inservice and computer usage, a survey was conducted among educators in northern New Jersey. Approximately 500 surveys were distributed to students enrolled in the Educational Leadership graduate program at William Paterson College, Wayne, New Jersey. This survey, consisting of nine questions relating to previous computer courses, computer usage in schools, and perceived computer educational needs, was distributed in November 1985. To attain a broad response distribution, students were responsible for: completing the survey and asking five colleagues

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in their school districts to also complete the survey.

Survey Responses

Identifying Criteria

Approximately 26% of the surveys were returned, representing educators from 26 school districts in four counties: Passaic (34%), Bergen (25%), Morris (26%), and Sussex (4%). Eleven percent of the respondents chose not to identify their school districts.

The sample was comprised of approximately 35% elementary teachers, 13% middle/junior high teachers, and 45% content (i.e., Reading, English, Science, Math, Social Studies, Computer Science, Business, Foreign Language, Music, Physical Education) or special area teachers (i.e., Basic Skills, ESL, Speech, Library, Special Education). Forty-five percent of the total sample have completed a baccalaureate degree; 53% have completed a master's degree; and 2% have completed a doctoral degree.

Previous Computer Courses

More than half of the respondents (51%) still have not had any course work with computers. Among those who did take courses, the courses most often cited, in descending order, were: Overview of Computers, Logo, BASIC, and Word Processing. Most courses were taken within the last five years, with the exception of a few computer science courses taken in the late sixties and early/middle seventies. Credit-bearing courses (1-3 credits) were taken at various four year colleges, two year colleges and school districts in which respondents are employed. Some

took non-credit courses at computer stores.

Computer Usage

Contrary to national portrayals, only 23% of the respondents indicated that they have one computer in their classrooms, only another 11% have more than one, and some of them are available only on a rotating basis. When computers were available, the Apple computer was, by far, the one most frequently mentioned.

Computer availability in labs seems to be more prevalent than computers in classrooms, with 51% of the teachers indicating that a minimum of six computers is available for student use. Again, the Apple was in first place in terms of numbers, with the Commodore and Radio Shack receiving lagging Honorable Mentions.

Computers seemed to be used most frequently for computer awareness, drill practice/tutorial, and BASIC; simulations/problem-solving, Logo, and word processing seemed to be used less frequently than the first three areas but more frequently than spreadsheets, database management or PASCAL.

Computer Education Interests

Eighty-one percent of the respondents indicated that they were definitely (45%) or possibly (36%) interested in taking courses in computer education. Only 19% indicated that they had no interest in future computer coursework. As many as 44% of the respondents also indicated

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that they would definitely (23%) or possibly (21%) be interested in pursuing masters level work in computers, particularly if it would prepare them to become supervisors/coordinators of computer programs in schools.

Not surprisingly, the respondents' interests in future computer coursework seemed to parallel current computer usage in schools. The first ten areas cited, in descending order, were: (1) Computer Software: Curriculum Integration and Instructional Design, (2) Word Processing, (3) Introduction to BASIC, (4) Advanced BASIC, (5) Overview of Computers in Education, (6) Telecommunications, (7) Computer Graphics, (8) Introduction to Logo, (9) Data Communication and Computer Network, and (10) Administration and Supervision of Computer Programs.

Two observations were made: (1) respondents' first choice of Curriculum Integration and Instructional Design could reflect teachers' interest in planning cohesive, integrated approaches for software implementation rather than depending on serendipitous connections between the software and curriculum; and (2) respondents' interest in word processing may indicate that its less-than-frequent use in schools (as perceived by these respondents) may be due to minimal inservice opportunities in the past.

Conclusions and Recommendations

Although small in sample size, this survey highlights current computing conditions for one piece of the state's geographical pie. While national statistics on computer availability continue to soar, the local

picture is not nearly as comforting. Obviously, computers are being purchased; however, a majority of the classroom teachers still must bide their time before computers are readily accessible for classroom instruction.

As for the specific computers being purchased, Apple Computer, Inc. definitely is reaping what it has sown in terms of educational marketing. When computers are purchased they are, more often than not, placed in labs. According to Becker (1984), this reflects administrative decisions to get a larger number of teachers to use computers for a broader range of uses. He also points out that, while there is more computer use, it usually is heavy on programming for a narrower range of the student population. Consequently, the only way to insure widespread instructional use is to eventually house computers in both classrooms and labs.

Given that the computer population is sparse, at best, it is not surprising that slightly more than half of the respondents have not had any previous computer coursework. Yet, because a large percentage of these respondents are interested in pursuing future courses in computer education, it is important to capitalize on teachers' intent. Courses should continue to be offered in those areas frequently used in schools, (for example, computer awareness, software evaluation, and BASIC) and in those areas which show promise as effective tools for school use (for example, word processing, telecommunications, and database management).

With any new tool, certain rudimentary areas need to be explored before developing a modicum of sophisticated use. Computer use in schools has been travelling the same path. Other than BASIC (usually assigned to math-oriented teachers), the two most frequently cited areas (computer awareness and drill and practice/tutorials) were easy

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to assimilate into one facet of the curriculum with minimum computer exploration. We now are reaching a critical juncture in which computers are becoming a more integral part of the curriculum in terms of its tool uses and its catalytic ability to stimulate higher level thinking. Consequently, teachers need to hone their computer skills while developing a broader perspective on how to effectively integrate the various computer uses into the total school curriculum.

Undoubtedly, computers will continue to appear in New Jersey's classrooms and labs. Effective inservice efforts must continue to parallel computer acquisitions so that a greater percentage of our teachers appreciate how the computer can be used as a significant instructional vehicle for preparing today's youth for tomorrow's world.

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